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The EXTENSION ANIMAL HUSBANDMAN

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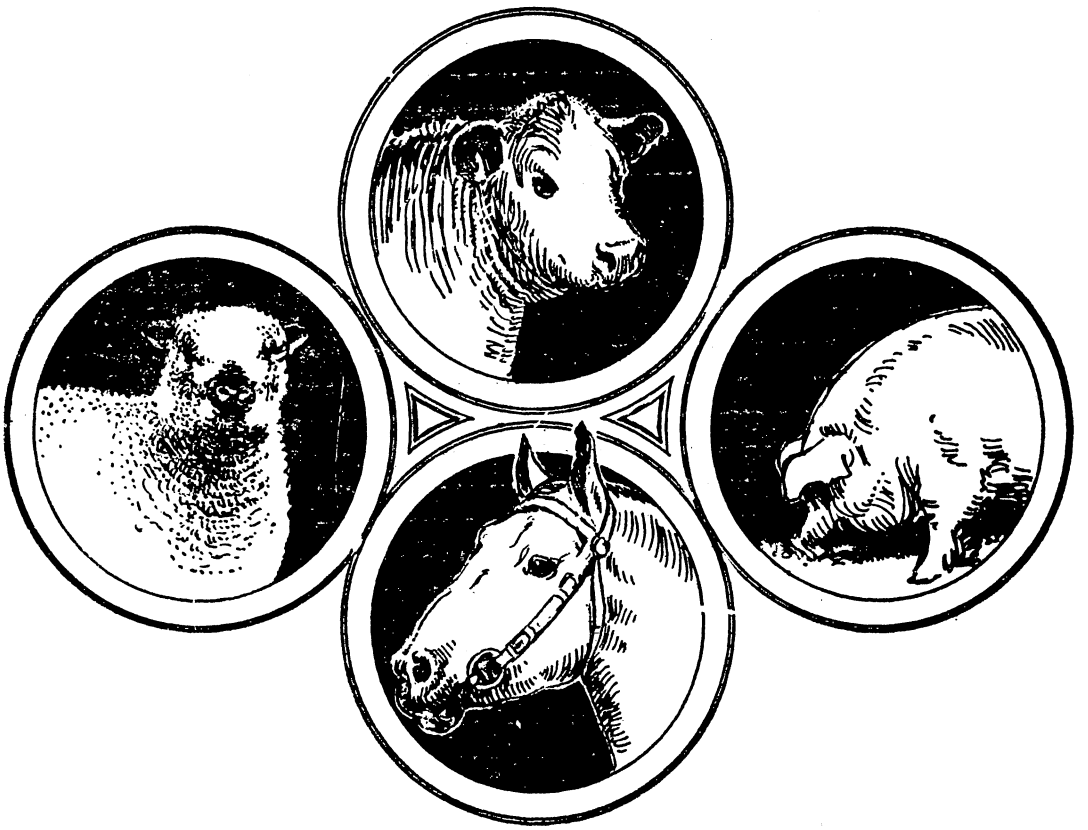

UNITED STATES DEPARTMENT
OF AGRICULTURE
WASHINGTON,
D.C.

Serial No. 20

December, 1930.

EXTENSION'S AIM

To help lift the burden,
Point the better way
Give vision to toil
And the hope of a better day.

To teach the larger life,
Encourage a soul
To still greater tasks,
A still higher goal.

To look beyond the plow,
Take a man's full part
In community and town,
In assembly and mart.

Extension is teaching,
Of greatest value when
Its goal of achievement
Is the inspiration--the making--
of men.

--From "The Agricultural Extension System of the United States," a book by C. B. Smith and M. C. Wilson.

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

THE EXTENSION ANIMAL HUSBANDMAN

Issued quarterly by the Bureau of Animal Industry and the Office of Cooperative Extension Work, Cooperating.
C. D. Lowe, Senior Extension Animal Husbandman.

Serial Number 20 — — December, 1930

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LIVESTOCK PRODUCTION IN RELATION TO MARKET DEMAND

by

C. B. Denman, Member, Federal Farm Board

- - -

One of the uncertainties of our present business world is to be found in an ever-changing public demand for saleable products. One has only to glance around him and see glaring illustrations of its effect in ruined or badly crippled industries which have not been able to keep abreast of this "will of the wisp," the changing public demand.

Similar changes have affected the livestock industry. With the growth of our industrial centers and the use of more labor-saving machinery, the food requirements of consumers have diminished in some commodities and increased in others. Large numbers of people live in small apartments and this fact alone has been responsible for changed eating habits both as to quantity and as to type of product consumed. Mounting distributing costs have also influenced the consumption of meat.

For years the efforts of agricultural colleges, extension forces and breed associations have been centered upon improving and furthering the scientific production of livestock. That wonderful progress has been made is best illustrated by the improved quality of livestock reaching our central markets.

This is an age of extreme competition. For example, lumber is competing with cement and bricks, wool with silk, cotton with rayon, and meat with dairy products, poultry and all kinds of fruits and vegetables. For this reason, it behooves the livestock man to produce a product which is attractive to the consumer and meets his particular demand.

Every branch of the livestock industry is faced, then, with the problem of keeping abreast of the times, of satisfying changing consumer demands, of competing with other food products which are themselves produced in varying quantities from year to year. To accomplish this requires a certain amount of flexibility, which may very quickly be converted from an asset into a liability.

The problem becomes one of stabilizing the industry without impairing this necessary quality of flexibility. How can this be done?

Take the sheep business, for example. In the face of repeated danger-signals put out by the Department of Agriculture, our sheepmen continued to expand their operations until this year they produced a surplus of about 2 million lambs, resulting in drastic declines in sheep and lamb prices and causing enormous losses to sheepmen everywhere.

While such a situation is deplorable, there are several means of correcting it: First, market all heavy fat lambs direct to slaughterers. Second, sort out all the old ewes from the breeding flock and keep them only for their wool production. Do not flood the market with old ewes as this low grade product will only tend to lower prices on all grades and in addition will prejudice consumers against lamb as a food. Per capita consumption of lamb and mutton has shown an increase since 1922, from 5 pounds to 5.8 pounds in 1929, but we are still 2 pounds per capita under the 1912-1913 figure. Due to low prices, 1930 consumption should show a still further increase..

Turning to pork - the only meat product we still produce in such abundance as to have an exportable surplus of any size - what do we find? A review of inspected slaughter figures for the past ten years indicates that the hog producer has been severely penalized in years of surplus production while in years when production more nearly met consumptive demands the price has been fairly satisfactory. Comparing official figures for hogs slaughtered under Federal inspection for the crop years beginning October 1 of 1923 and 1925, we find that in 1923 livestock producers marketed a crop of 53 million hogs for a total return of 890 million dollars, while in 1925 they marketed 41 million hogs and received 1,201 million dollars for them. The average live weight of hogs killed under Federal inspection for the ten-year period from 1920 to 1929 was 228 pounds. In checking over average weights by markets in different areas, we find that the heavy corn and hog-producing regions such as Iowa, Nebraska, South Dakota, Illinois, Missouri and Minnesota will average close to 250 pounds.

Reviewing our production and consumption figures for 1928, we find that in only 15 States was there more pork produced than consumed, and in digging further into the facts we find that our exportable surplus of pork and lard for the past 4 years amounts to approximately one to one and one-fourth billion pounds per year.

A reduction of say 20 pounds per head in the six State areas above mentioned would go a long way in reducing this surplus.

The Agricultural Marketing Act specifically directs the Farm Board, as one of its duties, to aid in the prevention and control of surpluses in any agricultural commodity, through orderly production and distribution, so as to maintain advantageous domestic markets and prevent surpluses from causing undue and excessive fluctuations or depressions in prices for that commodity.

The fact that our farm factories are capable of producing a crop of 53 million hogs weighing 12 billion pounds is not a reason for doing so when the facts indicate that 41 to 43 million hogs weighing 9 1/2 to 10 billion pounds would mean an added return to livestock producers of from 180 to 300 million dollars. This does not mean that our hog producers will have to keep numbers down to a low figure, but rather that they exert some control over tonnage by feeding for lower average weights.

It will be possible, however, to effect such improvement only through organized cooperative effort, and for that reason the Farm Board has been active in aiding in the organization and financing of national cooperative marketing associations in the various commodities. The livestock producer of the United States now has an active and steadily growing national agency known as the National Livestock Marketing Association with branches at most of our principal terminal markets as well as regional agencies throughout the Western and Pacific Coast States. This organization is in a position to aid the livestock producer in financing both his feeding operations and his marketing.

Whether this association will be able to accomplish the objects for which it was organized depends largely upon the support given it by the livestock producers of the United States.

FEDERAL ANIMAL PARASITE SPECIALIST APPOINTED

Dr. E. M. Nighbert was appointed extension parasitologist on November 1. He represents the Zoological Division of the Bureau of Animal Industry and the Office of Cooperative Extension Work of the Extension Service. His duties will be similar to those of other subject-matter specialists of the Department.

ECONOMICAL PORK PRODUCTION IN ILLINOIS

by

E. T. Robbins, Livestock Extension Specialist

- - -

The Illinois project on economical pork production is centered around sanitation and feeding. Reports from cooperators indicate that each of these two factors may be estimated conservatively to save $2.50 on the average cost of producing each hog for market.

The men are urged as their first and easiest step in economy to use the McLean County System of Swine Sanitation as fully as may seem necessary to avoid runt pigs. Farmers' reports indicate that, on the average, sanitation enables them to produce as many pigs as usual from three-fourths as many sows and that they may reasonably expect only about one runt among each 100 pigs as against eleven among pigs raised the old way. The sanitation pigs are ready for market 6 weeks younger than usual, and they use from one-seventh to one-fifth less feed to produce each 100 pounds of pork. The saving in feed usually amounts to $2.50 in the cost of producing each hog weighing 225 pounds. Besides this saving, there often is an increased price for early spring pigs which are sold early in the fall before the usual slump in prices. Our hog-cost accounts show no additional cost for sanitation.

Economical feeding is exceedingly important, because hog-cost accounts show that feed represents from 80 to 85 per cent of the total cost of producing pork. Farm records show great variations in cost and these seem to be due principally to the choice of feeds. Last year, 61 complete hog records were secured, taking account of all the feed and all the hogs on the farm for the year. The average amount of protein feed used with each bushel of corn was 3.6 pounds. The average amount of pork produced from each bushel of corn and the protein feed fed with it, was 14.8 pounds; and the average amount of feed used to produce each 100 pounds of pork was 416 pounds. On 42 of these farms the protein feed was altogether from economical sources, such as tankage, linseed oil meal and alfalfa hay, in the proportion of 2:1:1, with some small quantities of skim milk, soybeans and soybean meal. These farms used 3.4 pounds of protein feed with each bushel of corn and required only 399 pounds of feed for each 100 pounds of pork. The other 19 farms used con-

siderable quantities of ready-mixed feeds, gave a larger quantity of protein feed with each bushel of corn, and used considerably more feed to produce each 100 pounds of pork. The records also showed no advantage in feeding any minerals other than common salt.

These results serve to support the recommendations of the University of Illinois that farmers should feed a reasonable amount of protein feeds of animal sources such as skim milk or tankage which supply minerals liberally, and use pasture in summer and alfalfa hay in winter to supply vitamins. The general statement made at the hog-feeding schools is that suitable protein feeds with pasture in summer and alfalfa hay in winter are all that are necessary to supplement farm-grown grain and salt for hogs. These feeding schools are held to show farmers how to figure their protein requirements and the cost of the protein. Farmers are shown that young pigs require a higher percentage of protein in the ration than older shotes or large hogs. They are encouraged to keep in mind the percentage of total protein in the ration because that figure always may be known, and there are some feeds for which the digestible protein is not known.

Especial emphasis is placed upon the economy secured by using suitable feeds having a low cost per pound of protein with which to balance the ration. It is easy to figure the cost of a pound of protein. Divide the price of 100 pounds of feed by the percentage of protein as marked on the sack or as given in the table of Composition of Feeds. The result is the cost of one pound of protein. A little experience in balancing rations indicates the financial advantage of using cheap protein so long as the efficiency of the ration is maintained.

The final computation should include the cost of 100 pounds of the completed ration including the grain and supplemental feeds. This gives each feed full credit for the other materials besides protein which it contains and serves as a basis for comparing that ration with any other ration which is assumed to be equally efficient. Each dime saved in the cost of 100 pounds of the whole ration means a saving of one dollar or more in the cost of producing each 225-pound hog. At the hog feeding schools last winter the average saving computed between the most economical and most expensive rations suggested was $3.39. However, the moderate saving of $2.50 per hog, which is suggested as a result of careful figuring, is sufficient to interest farmers in the project.

This project is promoted through county hog-feeding schools in which the farmers are shown how to figure the protein requirements and to figure the cost of protein in different feeds and the cost of 100 pounds of the combined rations. Facilities are provided so that each man can figure for himself. We held 35 such schools last winter with a total attendance of 2,143. A survey of methods which the men proposed to use during 1930 was made in connection with the schools. Those men who reported that they planned to use sanitation and balance their rations with feeds having a low cost per pound of protein were placed on an Honor Roll. This list numbers 522 men in 27 counties.

This fall three district schools were held in southern Illinois where the hog industry is comparatively small. Twenty-seven county agents were given this instruction at these district schools. These agents will hold schools in their counties to extend this information.

In the principal hog-producing sections of the State, 41 county schools will be held this winter principally for the instruction of the Honor Roll men and other leaders on whom the county agents will rely for assistance in holding local feeding schools. The numbers of local schools which the county agents have arranged to hold vary from 2 to 19 in a county. The first of the county schools have been held and the interest has been very good.

Through this project, handled in this way, we expect to extend the list of Honor Roll men so as to include a large number in each hog producing county. We assume that the best service we can give to a hog raiser is to help him to save money by adopting the two most important practices, which together seem to save about $5 as an average on the cost of producing each hog.

Incidentally, in connection with this project, some attention is given to other factors such as purebred sires, and sows which raise large litters. Of course, we emphasize the importance of general good care and management in connection with the business. However, the instruction centers mainly about the two factors which represent the most money under present farm conditions, namely, sanitation and the use of suitable feeds having a low cost per pound of protein with which to balance the ration.

STATISTICAL RESULTS

Extension work in animal husbandry reached every county in the State in 1929 in one or another phase. According to a summary from county agents' reports animal husbandry work was carried on in 1,486 townships and communities. One hundred four thousand, six hundred thirty-three people were reached directly through meetings and demonstrations of one sort or another. Nine hundred seventy-nine leaders assisted in setting up and carrying out the various demonstrations and meetings. Exactly 100 result demonstrations were completed. Four thousand forty-seven farmers were assisted in securing purebred sires. Seven thousand, three hundred ninety-eight farmers were assisted in working out better feeding systems and improved rations. Improved livestock practices of one sort or another were started on 15,527 farms through the work of the extension specialists and the county agents. -- From Iowa Annual Report.

WHAT ARE THEY?

The cattle you drive each day to the pasture,
or tie in the bard to be fed --
The sheep you so vigilantly guard from disaster,
and give hay each night in the shed --
The pigs you care for like they were your master,
ARE THEY SCRUBS, OR PUREBRED?

-- Rudolph Spires Allen.

HE KNEW WHAT HE WANTED

A grizzled old cow hand experienced in the overcooked "chow" of the camp cook out on the range, drifted into a modern cafe along the gay white way and ordered a beef steak. When the petite waitress served it a few minutes later, the old fellow observing the reddish juice oozing from its rare-done condition exclaimed, "Take that back Miss and have it cooked. I've seen worse hurt cows than that get well."

WHAT'S NEW IN THE STATES

Alabama

County Agents J. H. Witherington and G. W. Ray are joint captains of a movement launched recently for the purpose of acquainting the public with the excellent quality of peanut-pork so that it may be marketed on its true value rather than on an imaginary value which is causing it to be heavily penalized.

The movement is being promoted on the basis of several fundamental facts. One is that farmers in southeast Alabama can raise hogs on peanuts at a low cost per pound. Another is that they like the hog business and are willing to increase production if prices will warrant. A third is that the quality of peanut pork does not justify a penalty; in fact, there are those who feel that it should bring a premium.

Director L. N. Duncan, District Agent Emmet Sizemore, and other extension workers have taken keen interest in the movement and are giving it their wholehearted support. The Kiwanis Clubs of the State were quick to see the merits of it and are aiding. Already the Auburn Kiwanis Club has had a peanut-pork day and the Birmingham Kiwanis Club will hold a similar occasion on December 2. Dr. M. F. Jackson, chairman of the Alabama Kiwanis committee on agriculture, and LeRoy Holt, district governor-elect, are enthusiastic about it. Thad Holt, director of the Alabama Industrial Development Board, has pledged the support of his organization.

It appears therefore that peanut-pork produced in Alabama is destined to occupy a position at the first table. If this is achieved the price will advance for the penalty will be removed. Production will increase with a bigger demand and better prices. Furthermore, consumers will have a good product.

As a part of the development program a very attractive peanut-pork exhibit was on display at the Montgomery Fair. It was arranged by County Agent Ray. It will be sent to the International Livestock Exposition at Chicago. -- F. W. Burns.

Arkansas

As the counties of central, western, and southwestern Arkansas were released from tick quarantine there became available considerable areas of timber and creek bottom lands which

produce grass best utilized by cattle. At one time these areas were well stocked with native cattle among which were many steers of two, three, and four years old. When the outlet for these became restricted on account of the quarantine the number became limited until much of the grass was not being utilized. In 1928, when it was apparent that a number of these counties would soon be released from quarantine, an effort was made to interest the farmers in a feeder calf program. It was recommended that a start be made with native cows and purebred beef bulls; that early spring calves be produced which would be marketed as feeders in October.

The production of these calves seemed to be the most economical method of utilizing the grass and available roughage. The roughage is more suitable to wintering cows than calves, as there is a serious loss in weight on weaning calves which are wintered on low-quality roughage. It was recognized that some community effort would be necessary in order to have enough calves within a given area for car-lot shipments.

The work of County Agent E. D. White of Sevier County is a good example of what can be done along this line. He started a purebred sire campaign in 1929, outlining at the time the plan of production. Twenty-four purebred bulls were placed in the county in 1929 and 1930. Some, being yearlings, were not used much. There were 170 first-cross calves in 1930, with 550 cows bred that summer to these bulls.

In getting in these bulls Mr. White helped to ship out the scrub bulls and an interest in cooperative shipping of all classes of cattle and hogs was aroused to such an extent that 20 carloads of livestock were shipped through the association in 1930. The first-cross calves, which were shipped in October to Oklahoma City brought $6.00 and $8.00 per hundred as compared with $3.50 to $4.00 per hundred brought by common calves out of the same type of cows, run on the same kind of range.

With the increased number of calves for another year it will be possible to ship carload lots of feeders. This general plan will be followed in eight counties in 1931 where the attention to good beef cattle heretofore has been very slight.

-- M. W. Muldrow.

Connecticut

L. V. Tirrell, sheep specialist, resigned that position to become head of the animal husbandry department at the University of New Hampshire.

Georgia

W. F. Ward has been appointed beef cattle specialist. Kenneth E. Litton has resigned to accept a position in Virginia with Geo. C. Herring, animal husbandry extension specialist. A. E. Simpson, Jr., of the resident teaching staff was appointed as Mr. Litton's successor on November 1.

Iowa

Earl Colville of Taintor, has won the Iowa Pig Crop Contest for the second time. Sixteen Poland China and Duroc Jersey sows saved 143 pigs, an average of 8.93 per sow. The pigs weighed 262.8 pounds each at 180 days, making an average of 2349 pounds per sow.

The second high man was Karl Hoffman of Ida Grove with 2169 pounds or pork per sow. The lowest report recorded was 1076 pounds per sow.

In analyzing the records there were three outstanding factors which contributed toward success, namely, good breeding stock, health, and good feeding.

Mature sows and boars were used on the farm where best records were made. Gilts and young boars did not produce the pigs making the weight that the older stock did. Colville's sows weighed from 500 to 800 pounds and his boar weighed 700 pounds.

Good health is also absolutely essential. Unthriftiness was one of the most common causes of slow gains and low weights. The heaviest pigs and the most pork produced per sow were the result of following the clean ground plan of raising pigs. Colville followed the sanitation plan to the last detail.

Results showed that pigs to gain fast must be fed well. The pigs in the contest were practically all full fed dry feeds from self-feeders. Corn and hulled oats were the most common grains used and were balanced by mixtures of tankage, linseed oil-meal, and soybean meal, or by some commercial protein mixture.

Good alfalfa or clover pasture helped lower feed costs on most of the farms represented. Mineral mixtures were used by all contestants.

The following is a list of winners in the Pig Crop Contest in order of placing:

Name	Address	Pork Per Sow Lbs.
Earl Colville	Taintor	2349
Karl Hoffman	Ida Grove	2169
C. E. Landtiser	Grinnell	2088
Wes Eivins	Macksburg	1865
John Stiffler	Mitchellville	1755.7
Wilbur Molison	Grinnell	1643.7
C. B. Michel	Marion	1543
Flynn Bros.	Washington	1525.4
Geo. Johnson	New Hampton	1487.4
M. M. Flynn	Washington	1417
Floyd Edgington	Sheffield	1412
C. L. Edgington	Sheffield	1388
Harry Poundstone	Clarion	1211
L. E. Raffety	Grinnell	1076

-- E. L. Quaife

Maryland

At this writing, only one litter out of the 33 entered in the 1930 Maryland Litter Contest remains to be weighed. On December 12, the final report of the contest will be available.

This contest was started in 1925. In that year four litters completed the work, making the 1500-pound requirement in 150 days. The contest has grown considerably during the six years of its existence. The first contest, back in 1925, was won by a litter of 9 Duroc-Jersey pigs weighing 1612 1/2 pounds. The heaviest weight so far recorded in 1930 is on the litter of 11 pigs owned by Maurice Iager, of Fulton, Md. It weighed 2225 pounds at 151 days. Mr. Iager had another litter of 9 pigs which weighed 1853 pounds. These were two outstanding litters. It will be noted that the total weight of the two litters was over 2 tons. With one exception Mr. Iager's heaviest litter is the heaviest litter ever weighed in the contest. The exception was a litter of 12 pigs bred and raised in 1926 by G. C. Oland of Olney, Md. It weighed 2423 pounds at 150 days.

County Agent John W. Magruder of Howard County has the

distinction of having the most litters entered in the 1930 contest, with 10 litters. All of them made the required weight of 1500 pounds. Two litters were not weighed because of the extremely hot weather at weighing time.

Due to the short corn crop in Maryland this year, many of the litter contest hogs have received wheat in their rations. The carcasses of a number of hogs that have received wheat have been carefully examined and found to be well finished and hard.

The Maryland Litter Contest is under the supervision of the Maryland Stockmen's Association and the University of Maryland Extension Service. We feel that our 1500-pound requirement in 150 days is very appropriate for our conditions, inasmuch as the Baltimore market requires light hogs weighing from 135 to 185 pounds. Where pigs are pushed the limit and kept longer than 150 days, they go too far over the weights most favored by our local packers.

A total of $800 in cash is distributed annually to the county and State winners in this contest. This money is furnished by the Schluderberg-Kurdle Packing Company of Baltimore.

The Maryland Litter Contest has meant much to our hog raisers in pointing the way to the essential principles of hog production. Numerous hog men here formerly believed that hogs could only be fattened in pig pens or sties. Now they realize they can keep their hogs cleaner and healthier and grow them more economically by using forage crops. Also it has been conclusively demonstrated, and there is much interest in this fact, that it does not take a year, nor even half a year, to grow a healthy hog to market weight. A few years ago many of our hog men could not have been made to believe that a hog of satisfactory market weight and finish could be produced in 150 days' time.

The most valuable lesson this contest has taught Maryland farmers is the fact that pigs can be grown and made ready for market in five months' time, or less.

-- K. A. Clark.

Louisiana

W. T. Cobb, formerly of the New Iberia Experiment Station, has been appointed beef cattle specialist.

Minnesota

H. G. Zavoral, swine specialist, has been granted leave of absence and has gone to Russia to take charge of the Soviet government's swine production program on some 30 different farms. His address is Krustalnyi, Svinovad 1, Apt. 105, Moscow, Russia, U.S.S.R.

A. E. Engebretson, former county agent in Faribault County is substituting for Mr. Zavoral in the swine work for the year.

The Koochiching County Ram Association was perfected this summer. Its general purpose is to maintain a sheep-producing enterprise on a cooperative plan, with the improvement of sheep owned and produced in Koochiching county as its principal aim. Its business will consist of the purchase, use and exchange of meritorious rams. The plan of the association is similar to that of the well-known bull ring or bull association.

The reasons for the organization of this association in this county were several. It is a county, due to forage conditions, especially well adapted to sheep production. Second, the county's sheep raisers being limited in capital, have difficulty in securing good rams. Third, the distance from the market makes it important to ship cooperatively lambs of high quality.

The general plan is that the association owns the rams. Fifty ewes constitute a block for one ram. Participation in the organization is based on the number of ewes owned. Rams are rotated each year in August, so that each man has his ram before the breeding season opens. A breeding fee is paid annually after the first year, as a replacement fund for rams lost or discarded.

The first rams were purchased this year - sixteen in number. It is believed that through this plan, the members will have the use of much higher quality rams at a very much lower cost than they have been able to obtain previously. As a result of this introduction of good blood, year after year, the community should come to be recognized for the high quality of its lamb crop. -- W. E. Morris.

Nebraska

W. W. Derrick, now a member of the resident teaching staff, will take charge of the animal husbandry extension work on January 1.

North Dakota

S. G. Denner resigned the position of animal husbandry extension leader on November 1 to go into county agent work in Minnesota. Geo. J. Baker, who formerly held the position, was again appointed to fill the vacancy.

Pennsylvania

As a result of cost account work which has been carried on in Pennsylvania by the Department of Farm Management, the records secured in ton litter work and in pork production clubs, we have learned what practices are most profitable on Pennsylvania hog farms.

To demonstrate these practices under typical Pennsylvania farming conditions, a project called "Swine Management Demonstration Farms" has been devised.

This project is carried out by the county agent and swine specialist. Three or more typical farmers in a county are selected as cooperators. These men are visited several times each year by the swine specialist, and as often as possible by the county agent who does the necessary follow-up work to keep the cooperator interested and to see that the program is carried out.

The cooperator is urged to use purebred hogs and handle them under the McLean County system of sanitation at farrowing time. A rotation of pastures is outlined and established as soon as possible. This not only makes it possible to carry out the sanitation system but reduces the cost of feeding. Proper methods of feeding with balanced rations are used. It has been brought out quite forcefully, in the records that have been kept, that few Pennsylvania farmers are using the most efficient or economical buildings and equipment. The cooperator is aided in erecting new buildings and equipment and rearranging those already on hand. Such labor-saving devices as self-feeders, waterers, and hurdles are constructed and where enough hogs are kept to make it economically sound, concrete feeding floors and drinking fountains are built.

Since it is not hoped to accomplish all of these things on any one farm in a year's time, the project is planned to cover at least a three-year period. During this time, in addition to rearranging the pasture rotation and building new equipment, complete records are kept to determine the cost of production and the amount of labor required to handle the hogs.

A number of meetings are held on these farms. Where practical a meeting is held when the project is started with the idea of creating an interest in the project among the people in the community. Other meetings are held as the project progresses. After the rotation of pastures has been established, the equipment erected, and the system established in its entirety, a final meeting is held to demonstrate results and to review the records which have been kept.

As this work is undertaken by a leader in the community in whom the people have confidence and on a convenient farm, the results are very convincing. It also gives the county agent and swine specialist an opportunity to give a visual demonstration of the equipment and methods which have proved most practical and profitable under Pennsylvania conditions. -- L. C. Madison.

Texas

Roy W. Snyder, formerly of the Iowa Extension Service has been appointed extension meats specialist.

W. R. Nisbet, former county agent has been appointed ranch organization and operation specialist for the Edwards Plateau area.

Utah

Kenneth C. Ikeler, dean of agriculture and part-time extension specialist resigned his connections with the college to become manager of the Union Stock Yards at Ogden, Utah.

Virginia

In placing purebred sires it is always more satisfactory to all concerned if the sires are brought into the counties needing them so that prospective purchasers can make their own selections and transactions. This has been the object of our bull and ram sales for a number of years, but we had done no work of this kind with boars until this year. An opportunity presented itself when we learned of a farm which had around 150 purebred spring boars, most of which would have to be castrated unless some means of disposing of them was found. A plan involving some preliminary work in several counties was suggested, this to be followed by a carlot shipment of boars to the section.

A representative of the farm made contacts with farmers in the counties through county agents, agricultural high school teachers, and banks. As a result two carloads of purebred hogs were shipped to three counties in one section. The shipments consisted of 126 boars and 60 gilts. In another county in another section 14 boars were placed, making a total of 140 boars. The placement of these boars was accomplished during a few weeks of September and October. Prices, including delivery to the counties and registration, were about double current hog prices..

The above was in addition to the Better Sires work which has been going on for a number of years. Eight counties entered in this project reported a total of 131 sires placed during the year, divided as follows: 55 beef bulls, 46 rams and 29 boars. One county, Craig, was declared free of scrub bulls two years ago, and Grayson county expects to get in this class next year.

-- Geo. C. Herring.

Washington

A recent development with us has been the promotion of animal husbandry work in the wheat growing area of eastern Washington. In the section of eastern Washington in which the rainfall is 18 to 20 inches peas and other legumes can be grown as well as wheat. Farmers themselves in these sections believe that if wheat stays much below eighty cents a bushel that it will be desirable for them to make some crop adjustments and many of them have voiced the opinion that they will shift to livestock, especially hogs. Our average import of live hogs into this State for the past three years has been 407,003 head. Of these, 165,130 have been shipped from points east of the Rocky Mountains, and from Canada. Some expansion in pork production in our well-adapted portions of Washington should increase the farm income.

Early in September, before the breeding season started, four swine tours were held in eastern Washington and northwestern Idaho, through what is known as the Palouse section. These tours were centered around four different localities. Preparations for these tours started in June--hogs were weighed into pea fields and records were kept on the pork production per acre from peas. Other management data were accumulated during the summer to be presented on these tours. A different demonstration was held on each farm visited.

Following is about the type of program that was used:

1. The type of hog that is best suited to the Palouse country, demonstrated by a college representative and by a packer buyer.

2. Swine equipment--hog cots, central houses, and various handy equipment.

3. Picnic lunch. Coffee and ice cream, furnished by a commercial club. The farmers brought their own lunch.

4. Moving pictures on round worms of swine, accompanied by a talk on management to prevent filth-borne diseases.

5. Post-mortem examination of diseased pigs, illustrating the effects of round worms.

6. Talk. The General Aspect of Pork Production.

7. Eight years' results in hogging off peas and gleaning pea stubble.

The University of Idaho, State College of Washington, Commercial Clubs of the section, Spokane Chamber of Commerce, and Spokane packers cooperated in making these tours a success.

More than two hundred farmers attended these tours, many of whom were previously wheat or pea growers that had not raised hogs. -- Hector G. McDonald.

West Virginia

R. S. Glasscock, part-time assistant in extension has resigned to accept a teaching position at the University of Missouri.

THE HORSE LAUGH

"The true value of horse sense," says the Louisville Times, "is shown by the fact that the horse was afraid of the automobile during the period in which the pedestrian laughed at it."

MICHIGAN HORSE EXTENSION PROGRAM

by

H. F. Moxley, Extension Specialist in Animal Husbandry

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Michigan, notwithstanding the fact that it is a center of motor manufacturing, finds it practical to use the horse. This is especially true on our smaller farms. Replacements are not sufficient to take care of the death rate, and the past year there was a 19,000 decrease in the horse population leaving the horse census at 397,000. The demand for horses as a source of farm power is indicated through the fact that 10,000 horses were shipped into the State in 1929, and 7,700 more during the first six months in 1930.

The revival of interest in horses makes it possible to promote horse extension work in this State. Our extension program is carried on primarily through the Michigan Colt Development Contest, breaking work, multiple-hitch demonstrations and plowing contests, and dynamometer work as conducted at various county fairs.

The need of raising more and better draft colts to take care of replacements on the farm has led to the Michigan Colt Development Contest. This work is being conducted the second year in this State; approximately 160 colts enrolled in ten counties are now involved in this work. These colts, of better draft type, both grades and purebreds, were weighed in during the fall and early winter of 1929. In counties where the work is promoted a feeding school is conducted during the winter months, a colt-breaking, training and foot-trimming demonstration is conducted during the early spring months, and a fitting and showing demonstration is held just before the fair season opens.

One of the most valuable results of this work is that farmers are growing out their colts with better feeding practices. Also, it stimulates interest in the most desirable type of draft colt, it encourages the men to care for the colt's feet and legs and encourages them to bring their colts to their local shows, properly trained and fitted. Colts enrolled in this work, to be eligible for award, must be shown at some colt development show.

At these shows, provided for by counties enrolled in the work, well-grown, well-fitted and well-shown colts attract much attention. It is not unusual for as many as 15 to 17 of these yearlings to show in one of these special yearling classes. A number of Michigan counties are paying from $100 to $300 prize money for this special class and any colt shown also is eligible to show in the open classes. The Michigan State Fair this year promoted the colt development show by offering $710 as awards for these special classes. Winning colts at the County Fairs are encouraged to show at the State Fair. The outstanding colts are later shown at a special colt development show during Farmers' Week.

Certificates of award are issued by the Michigan Horse Breeders' Association to owners of colts weighed in in this work, shown at some colt development show, and on those colts whose final weights were taken, as designated by the rules of the contest. Three types of certificates are issued; depending upon the gain made and the show record.

The colt development work is promoted through the county agents and the stallion owners within the county. The specialist comes in direct contact with many of the stallion owners and during the year personally visits the majority of the men having colts enrolled in the work. It is through personal contact with the owners that it is possible to bring out most of these colts to the local shows, and particularly is this true when the colts are selected to show at the State Fair and the Special Colt Club Show here at the College during Farmers' Week.

A second means of promoting horse extension work is through multiple-hitch demonstrations. Four, five and six-horse hitches are Michigan's popular sized multiple hitches for plowing work. Although hitch work has been promoted for the third year it is our opinion that more hitches were started in 1930 than in 1928 and 1929 combined. An intensive hitch program is conducted during March, April and May. This work is conducted in about one-third of the counties in the lower peninsula.

Awards are issued by the Horse Association of America to counties starting and having the largest number of hitches in use, this to be determined upon a point basis as a stimulus for promoting hitch work more intensively in a number of the Michigan counties. This program of work has been a means of getting a definite check-up on the men in certain counties who use the hitch, the time each year they use this particular hitch and the amount of

work they do. Users of the hitch, particularly in those counties competing, are anxious to interest their neighbors and a number of hitches have been started in this way.

All equipment necessary to conduct the four, five and six-horse hitch demonstration is carried by the specialist. Demonstrations are placed on farms where the hitch has not been in use. Almost invariably this man is a confirmed user of the hitch at the time the demonstration terminates. Eveners are made before leaving the farm and buck ropes are left or made, and this man is usually driving a big hitch when the specialist and county agent move on to the next demonstration.

Another method of promoting the multiple-hitch project was through the State Plowing Contest held in Calhoun County, during the fall of 1930. Here only multiple hitches were allowed to compete. Twenty-one contestants from four counties competed in the four, five and six-horse classes. The Horse Association of America, the users of the hitch and the horse breeders in Michigan made this project possible by raising sufficient money to make attractive prizes in each class. The premiums offered in each of the classes were as follows: First, $22.00; second, $17.00; third, $12.00; fourth, $7.50; fifth, $4.50; sixth, a complete set of eveners; seventh, buck ropes and tie chains. As a special prize $10.00 was awarded to the champion team. An attendance estimated at from 2,000 to 3,500 from all sections of the State was out to see this contest and much interest was manifest and we feel it to be a far reaching form of extension work.

A third means of promoting horse extension work is through breaking demonstrations. This phase of work has been especially beneficial in conducting foot-trimming demonstrations. Large numbers of western horses are shipped into the State each year and farmers are asking how these range horses can be best handled and broken. Demonstrations deal with approved methods of handling, the use of ropes, foot trimming, breaking to lead, hooking and driving to the wagon and later working these horses in the bigger hitches. There has been an increased demand for this work. It has been the aim to tie it up closely with the colt development work and the multiple-hitch demonstrations. This breaking work has been a means of interesting many people in horse work that previously would not come out to demonstrations.

A fourth phase of our horse work is the use of the dynamometer in horse pulling contests at the various fairs. There has

been a marked improvement in the type of horse competing during the past four years. Better draft teams, better shod and better collared and harnessed come out to these contests. This work is spectacular, but invariably the good type draft horse with size, properly shod, collared and driven, wins. Many contacts with horsemen are made at these contests and colt development shows have followed those fairs promoting horse-pulling contests. Many of our outstanding pulling teams are teams that on the farm work in the multiple hitch. Twenty-five per cent of the horses competing at the State Plowing Contest held at Marshall were outstanding pulling teams and have pulled in numerous pulling contests.

A total of 260 teams competed in the 16 contests held in the lower peninsula in 1930; 156 teams have competed in the lightweight divisions as compared to 104 in the heavyweight division. Twenty different lightweight teams have made tractive pulls of 2,750 or more; four different lightweight teams have held the State record this year and each of these four teams have made tractive pulls greater than their own live weight. The State lightweight record has been raised from 2,925 to 2,950, to 2,975, to 3,000, and finally to 3,150, a new State and world record. Eight different heavyweight teams have made tractive pulls of 3,050 or more this season. The State and world's championship has been bitterly fought for by four wonderful draft teams each having held the State record at one time or another during this season. The State heavyweight record this season was raised from 3,350 to 3,375 to 3,400, to 3,425, to 3,450, and finally to 3,575, a new State and world record.

Michigan farmers are interested in growing good horses, the development and handling of the horse and the most efficient use of the horse. It is the concensus of opinion that these four forms of promoting horse extension work, namely, colt development work, multiple hitch work, breaking work and dynamometer work are showing results.

POSTPONED

Some stockmen at Dillon, Mont., are having a lot of fun at the expense of a young lady reporter on a Dillon newspaper. During a big snow storm when she asked them how their sheep were coming along, they told her they had decided to postpone lambing a couple of weeks on account of the bad weather, and she printed it.

4-H CLUB SHOW

This year 245 fat pigs, 105 baby beeves, and 108 fat lambs were exhibited from 22 counties of the State.

A summary of the baby beef work taken from the reports submitted by the 4-H Calf Club members show that the average cost of the calves exhibited at the State show was $41.77 per head when they were placed on feed. On an average it cost $43.88 per head to finish these calves for the market. The total expense on an average was $81.68 per head, while the total receipts per head on an average was $121.82.

The average net profit per head, excluding the grand champion club calf from the list, was $35.96. The average number of days which the boys fed their calves was 221; the average gain in weight per calf was 518 pounds, and the average daily gain per head was 2.34 pounds per day. The average age of the boys who submitted reports of their work was 15.7 years.

-- From Oklahoma Annual Report, 1929.

A GENTLEMAN'S AGREEMENT

Dat ol' red hawg is jes' a hawg to' yo',
But t' me he is dis winteh's meat,
Bin a-nussin' him along all summeh th'u,
Givin' him grandes' things t' eat.

Acorns an' taters an' green co'hn an' slops,
Soy beans an' beechnuts an' mast,
Jes' stuffin' him ontwell he nigh pops,
Giv' him ev'thin' dat a hawg kin ast.

But dat hawg an' me knows wh'ah us is at,
Us has a gemmun's agreement, yo' see,
I feeds him ontwell he nice an' fat
An' atter dat--he is gwine feed me!

-- Edward F. Younger

"Opportunities might be more easily recognized if they didn't so often come disguised as hard work."

SWINE EXTENSION WORK IN GEORGIA

by

W. G. Owens, Extension Husbandman,
Georgia State College of Agriculture.

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This past year we have succeeded in organizing the swine work of the State on a commodity basis in that we now have an advisory committee to help formulate plans and policies for hog production.

The committee organization meeting was held May 29th in Atlanta. Present were L. Neuhoff, President of the White Provision Company; H. McDowell, Manager of Swift and Company; E. M. Nighbert, Zoological Division, U. S. D. A.; A. L. Hirleman, and W. H. Meadors, U. S. Bureau of Animal Industry, Atlanta; A. G. G. Richardson, Head of Veterinary Division, Georgia College of Agriculture; W. G. Owens, Swine Extension Specialist; and Milton P. Jarnagin, Head of Animal Husbandry Division, Georgia College of Agriculture.

Dr. Jarnagin was made chairman and W. G. Owens secretary of the committee. In addition to those present, other members added to the committee were J. M. Sutton, State Veterinarian, J. Phil Campbell, Director of Extension, L. M. Sheffer, State Supervisor for Vocational Agriculture, J. G. Oliver, Assistant Director and State Club Agent; J. William Firor, Head of Agricultural Economics and Marketing.

After a general and informal discussion, participated in by all present, the following outline of activities was agreed upon:

Name: This organization shall be known as the Georgia State Swine Committee.

Object: To study all conditions affecting the hog industry of the State and formulate a policy that will enable hog raisers to improve methods of breeding, management, feeding and marketing of hogs.

To correlate and coordinate all educational extension activities pertaining to the swine industry of the State and

disseminate to hogmen the best and most reliable information according to conditions in the different parts of the State.

Membership: The membership of the Georgia State Swine Committee shall be composed of representatives of -

(a) Agricultural education, experimental and regulatory activities of the State pertaining to the swine industry.

(b) Practicing veterinarians, stock yard and meat-packing officials.

Organization: The organization is a voluntary cooperative agency through which a State-wide hog-growing policy may be advocated along sound, conservative but progressive lines with the view of safe-guarding and fostering an industry commensurate with the needs of the State. There shall be a chairman and secretary elected by the State Committee and the following regional committees shall be appointed by the Chairman:

1. Northeast Georgia Committee
2. Northwest Georgia Committee
3. Southeast Georgia Committee
4. Southwest Georgia Committee

This gives the outline of the State Committee. The chairman appointed four district agents to be chairmen of their respective districts.

The Secretary was requested to prepare a list of purebred swine breeders and to send a copy to each committee member.

The State chairman was requested to prepare a description of the modern packer's type hog and give all publicity possible to it. The packing house representatives state that the ideal weight for hogs from their standpoint is from 190 to 230 pounds.

Below are some of the policies which the Committee recommends:

(1) Under average conditions obtaining on farms in Georgia an attempt should be made by the farmers to have some hogs coming onto the market at all seasons of the year.

(2) The so-called system, or lack of system, of roughing

hogs through on very light rations until more adequate feed supplies are available, is a bad practice and should be discouraged. The weight of hogs most desired by packers should be attained by the time the pigs have reached an age of seven months.

(3) The adoption of swine sanitation practices as demonstrated by the U. S. Department of Agriculture at Moultrie, Ga.,

(4) County agenst and teachers of vocational agriculture should do more work along the lines of practical methods of raising and feeding hogs.

(5) An effort should be made to get all swine producers to adopt better methods of management, breeding, feeding and marketing of hogs.

(6) The practice of spaying should be discouraged. Pigs should be castrated under four weeks of age.

(7) All scrub boars should be eliminated and only purebred sires of approved type used.

The Chairman was requested to prepare news-stories covering the work of the committee and their recommendations.

During the week of July 7 all the county agents and teachers of vocational agriculture were invited to attend a district meeting. Four meetings were held in the State and 46 county agents, 15 teachers and 200 farmers were present. At the conclusion of these meetings the county agents and teachers pledged themselves to locate ten demonstrations on hog production for 1931 as outlined during the meeting.

The county agents have a County swine committee to assist them in making up their program of work for the coming year. These plans of work are mapped out in the county agent's office during December and early in January. So the swine extension work has been planned along the line of first organizing the County swine committees; second, the District swine committees; and third, the State Swine Committee.

A meeting of the Georgia State Swine Committee has been called for January 14 in Moultrie, at which time will be held our third annual hog school for Georgia. This school will last two days, the county agents and teachers of vocational agriculture will come with their swine committees and any other farmers interested in growing hogs. We have found these schools to be of great help to our hog men and expect this to be the best and biggest one ever held in Georgia.

A NEW KIND OF EDUCATION

I have referred to adult education, not as a mere device to help folk who were never able to go to school, but as the continuation of learning throughout life.

The most interesting thing to me in the movement for adult education is that it is really laying the foundation for a new kind of education.

Adult education is not tied to a textbook.

It is not running on schedule time toward a graduation day.

Its followers are not straining to make a grade in any particular subject, such as history, physics, the classics, or mathematics, just because it is in a course of study that must be followed if a certain degree is to be won at the end of a certain time.

Edward C. Linderman, in his recently published book on "The Meaning of Adult Education," suggests four assumptions on which adult education rests, viz.:

First, adult education is not preparation for life; adult education is life.

This means that we must not make education a sheltered segregation from life; we must make it a guided immersion in life; education must neither begin nor end with school days; it must continue throughout life.

Second, adult education is more than vocational education.

This means that education is more than technical training for a bread-and-butter job; education must include aid to a man in doing his job well, but its ultimate objective is to enable him to understand his job in its relation to the whole of life, and to put meaning into the whole of life.

Third, adult education is the process of understanding situations rather than the process of learning subjects.

This means that in the informal pursuit of adult education we do not adjust a student to a set course of study, but we build the course of study around the actual problems and needs of the student. There is no set subject-matter he must learn; he hunts for and tries to master the subject-matter that is needed to help him adjust himself to his surroundings.

Fourth, adult education is a process of experience rather than a process of thinking.

Conventional education, too often, consists in thinking about some one else's experience and knowledge; but we rarely learn anything by just thinking about it; we really learn only what we do; therefore real education will be simply a struggle to be intelligent about what we do. -- Dr. Glenn Frank.

RECENT PUBLICATIONS

"A Manual For Hog Raisers" by Wm. J. Loeffel - Nebraska Experiment Station Circular No. 40.

"The Two-Litter Hog System on Indiana Farms" by G. E. Young - Purdue (Indiana) Experiment Station Bulletin No. 338.

"Soft Ear Corn Silage for Swine" by Evvard, Culbertson, Wallace, and Maynard - Iowa Experiment Station Bulletin No. 273.

"Wheat and Wheat By-Products in Swine Production" by Julius E. Nordby - Idaho Experiment Station Circular No. 55.

"A Partial Analysis of the Missouri Pig Survey Reports" by Thomsen and Richards - Missouri Experiment Station Research Bulletin No. 139.

"Studies in Swine Feeding" by W. E. J. Edwards - Michigan Agricultural Experiment Station Special Bulletin No. 199.

"Pig Club Work " by Pearson, Freeman and Branaman - Michigan Extension Service Club Bulletin No. 5.

"Market Lamb Production" by Shaw and Creech - West Virginia Extension Service Circular No. 296.

"Quality as a Factor in the Price of Kentucky Lambs" by Johnson and Phillips - Kentucky Experiment Station Bulletin No. 302.

"Fattening Western Lambs" by Claude Harper - Purdue (Indiana) Experiment Station Bulletin No. 333.

"Wool Studies with Rambouillet Sheep, No. II," by Hultz and Paschal - Wyoming Experiment Station Bulletin No. 174.

"Relative Efficiency of Calves, Yearlings and Two-year-old Steers for the Producer," by Culbertson, Evvard and Hammond - Iowa Experiment Station Bulletin No. 271.

"Effects of Sex, Length of Feeding Period, and a Ration of Ear-Corn Silage on the Quality of Baby Beef" by Bull, Olson and Longwell - Illinois Experiment Station Bulletin No. 355.

"Sweet Clover Hay for Beef Cattle - Fattening Baby Beeves and Two-year-old Steers" by Kiser and Peters - Minnesota Experiment Station Bulletin No. 261.

"The Use of Alfalfa Pasture for Fattening Cattle" by W. P. Snyder - Nebraska Experiment Station Bulletin No. 239.

"Cattle" - A book by Wm. McL. Raine and Will.C. Barnes - Doubleday, Doran & Company.

"The Range Cattle Industry" by Edward Everett Dale - University of Oklahoma Press.

"Influence of the Animal's Age Upon the Quality and Palatability of Beef" by Helser, Nelson and Lowe- Iowa Experiment Station Bulletin No. 272.

"Ranch Organization and Management in Western North Dakota" by M. B. Johnson - North Dakota Experiment Station Bulletin No. 237.

"Registry Books on Farm Animals" a book by Chas. S. Plumb- Ohio State University Press.

"Pastures for Georgia" by Tabor and Alexander - Georgia Extension Service Bulletin No. 389.

"Pasture Improvement" by Geo. L. Schuster - Delaware Experiment Station Bulletin No. 164.

"Growth and Development with Special Reference to Domestic Animals" - Missouri Experiment Station Research Bulletin No. 143.

"1930 Feeding Practices" - National Cottonseed Products Association Bulletin No. 5 - Dallas, Texas.

"Farm and Home Program for Mississippi County, Arkansas" - St. Louis Southwestern Railway Lines, St. Louis, Mo.

"Practical Experiences in Feeding Wheat" - Federal Farm Board Bulletin No. 2.